NICE National Institute for Health and Care Excellence

Surveillance report 2018 – Type 2 diabetes prevention: population and community-level interventions (2011) NICE guideline PH35 and Type 2 diabetes: prevention in people at high risk (2012) NICE guideline PH38

Surveillance report

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Surveillance decision

We will not update the following guidelines on diabetes prevention at this time:

- Population and community-level interventions for preventing type 2 diabetes
- Preventing type 2 diabetes in people at high risk

Reason for the decision

The evidence – population and community-level interventions

The surveillance review found a number of studies that included evidence supporting current recommendations on:

- developing a local strategy
- conveying messages to the whole population
- promoting a healthy diet: national action
- promoting a healthy diet: local action
- promoting physical activity: local action.

We did not find any evidence related to:

- integrating national strategy on non-communicable diseases
- local joint strategic needs assessment
- interventions for communities at high risk of diabetes
- promoting physical activity: national action
- training those involved in promoting healthy lifestyles.

The evidence – prevention in people at high risk

The surveillance review found a number of studies, which included evidence supporting current recommendations on:

- encouraging people to have a risk assessment
- risk identification
- matching interventions to risk
- design and delivery, and quality assurance of quality-assured, intensive lifestyle-change programmes
- providing tailored advice on physical activity
- dietary advice
- information and services for, and supporting lifestyle change in, vulnerable groups
- metformin.

We found evidence that bariatric surgery reduces incidence of diabetes, which was not covered in the current guideline. Although the new evidence is relevant to preventing diabetes, bariatric surgery is already covered by NICE's guideline on identification, assessment and management of obesity. The new evidence did not suggest that bariatric surgery should be considered in people not covered by the obesity guideline. Therefore, new recommendations in this area should not be added at this time.

We did not find any evidence related to:

- risk assessment
- content or quality assurance of quality-assured, intensive lifestyle-change programmes
- raising awareness of the importance of physical activity
- weight management advice
- training and professional development
- orlistat.

Ongoing research

The NHS Diabetes Prevention Programme is rolling out in a joint commitment between the stakeholders Public Health England, NHS England and Diabetes UK. The NHS Diabetes Prevention Programme is based on a service specification that adheres closely to NICE guidelines. Evaluation data from the NHS Diabetes Programme are expected from 2020. We will check for publications from this programme, including:

- Delivering a realistic Diabetes Prevention Programme in a UK community
- Delivering the Diabetes Prevention Programme in a UK community setting
- Evaluating the NHS Diabetes Prevention Programme (NHS DPP): the DIPLOMA research programme (Diabetes Prevention Long term Multimethod Assessment)
- NHS Diabetes Prevention Programme – digital stream

Additionally, ongoing studies identified by topic experts and stakeholders were assessed for the potential to impact on the guideline. The following 3 studies will be monitored by the surveillance programme:

- Norfolk Diabetes Prevention Study
- The PRmotion Of Physical activity through structured Education with differing Levels of ongoing Support for those with prediabetes (PROPELS): randomised controlled trial in a diverse multi-ethnic community
- Development and evaluation of very brief behaviour change interventions to reduce the risk of chronic disease in primary care

When publications relating to these studies are identified, the impact of the results on recommendations, and any associated need to update the guidelines will be assessed.

Equalities

The guideline already recognises that the risk of type 2 diabetes is higher in people of South Asian or Chinese descent at lower BMI than other populations. New evidence supporting the current recommendations in these populations was identified.

Editorial amendments

During surveillance of the guideline we identified the following issues with the NICE version of the guideline that should be corrected.

Population and community-level interventions for preventing type 2 diabetes

Footnote 1 of the recommendations notes that a definition of diabetes is an edited extract from an older guideline on type 2 diabetes (NICE guideline CG66), which has since been updated (now NICE guideline NG28), which does not contain similar information. Therefore, footnote 1 should be deleted.

Footnote 4 notes the BMI classification as an extract from the guideline on obesity prevention (NICE guideline CG43), however the relevant section has been updated and is now contained in obesity: identification, assessment and management (NICE guideline CG189). The footnote should be updated to refer to NICE guideline CG189.

Preventing type 2 diabetes in people at high risk

NICE guideline PH38 recommendations 1.11.5 and 1.13.8 have a cross reference to the guideline on obesity prevention (NICE guideline CG43), but the relevant sections have been updated in obesity: identification, assessment and management (NICE guideline CG189). This is potentially confusing because the public health recommendations in NICE guideline CG43 still exist. The cross reference should be updated to take the reader directly to NICE guideline CG189.

PH38 has a general cross reference to four commonly used methods to increase physical activity (NICE guideline PH2) at the end of section 1.12. However, this guidelines has been updated and replaced by 3 new guidelines: walking and cycling (NICE guideline PH41); physical activity: brief advice for adults in primary care (NICE guideline PH44); and exercise referral schemes to promote physical activity (NICE guideline PH54). This cross reference should be updated.

One stakeholder noted that non-alcoholic fatty liver disease is a known risk factor for type 2 diabetes, which is supported by the recommendations in non-alcoholic fatty liver disease (NAFLD): assessment and management (NICE guideline NG49). We will make an editorial amendment to footnote 1 of the recommendations (a list of conditions that can increase the risk of type 2 diabetes) to note that NALD also increases risk of type 2

diabetes, with reference to the NAFLD guideline.

Overall decision

After considering all the evidence and views of topic experts and stakeholders, we decided that the recommendations in both guidelines are still current and no updates are necessary.

How we made the decision

We check our guidelines regularly to ensure they remain up to date. We based the decision on surveillance:

- seven years after the publication of NICE's guideline on population and community-level interventions for preventing type 2 diabetes (NICE guideline PH35) in 2011
- six years after the publication of NICE's guideline on preventing type 2 diabetes in people at high risk (NICE guideline PH38) in 2017.

For details of the process and update decisions that are available, see ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual.

Previous surveillance of these guidelines in 2014–15 resulted in a partial update to the guideline on diabetes prevention in people at high risk (NICE guideline PH38), which was published in September 2017.

Previous surveillance update decisions for these guidelines are on our website.

Population and community-level interventions for preventing type 2 diabetes

We found 12 studies in a search for systematic reviews, randomised controlled trials and observational studies published between 1 July 2014 and 30 October 2017. We also included 5 relevant studies from a total of 5 identified by members of the guideline committee who originally worked on this guideline.

From all sources, we considered 17 studies to be relevant to the guideline.

We also checked for relevant ongoing research, which will be evaluated again at the next surveillance review of the guideline.

See appendix A1: summary of evidence from surveillance for details of all evidence considered, and references.

Preventing type 2 diabetes in people at high risk

We found 131 studies in a search for systematic reviews, randomised controlled trials and observational studies published between 1 July 2014 and 30 October 2017. We also included 5 relevant studies from a total of 25 identified by members of the guideline committee who originally worked on this guideline.

We also included 3 studies identified in comments received during consultation on the 2018 surveillance decision.

From all sources, we considered 139 studies to be relevant to the guideline.

We also checked for relevant ongoing research, which will be evaluated again at the next surveillance review of the guideline.

See appendix A2: summary of evidence from surveillance for details of all evidence considered, and references.

Views of topic experts

We considered the views of topic experts, including those who helped to develop the guideline. Areas highlighted by topic experts included evidence on the effects of sugar taxation, lifestyle interventions, and validated tools for assessing risk of type 2 diabetes.

Views of stakeholders

Stakeholders commented on the decision not to update the guidelines on diabetes prevention. Overall, 14 stakeholders commented including: 6 companies representing industry, 2 professional bodies, 2 public sector bodies, 3 charities and 1 academic institution. See appendix B for stakeholders' comments and our responses.

There was mixed opinion from stakeholders as to whether the guidelines needed updating. Six stakeholders thought the guideline on individual intervention (NICE guideline PH38) should be updated, citing scope expansions and new evidence in the areas discussed below.

Population and community-level interventions for preventing

type 2 diabetes (NICE guideline PH35)

One stakeholder disagreed with the initial decision not to summarise new evidence on population and community-level interventions. In response to this comment, we prepared a summary of evidence for that guideline.

Preventing type 2 diabetes in people at high risk (NICE guideline PH38)

Low carbohydrate diets

Several stakeholders suggested that the guideline should be updated to address low carbohydrate diets. However, none of the studies provided by stakeholders were included in the summary of evidence because they addressed a population that was not relevant to the diabetes prevention guidelines.

A new risk assessment tool (QDiabetes-2018)

One stakeholder suggested that the guideline should be updated to include the QDiabetes-2018 risk assessment tool. The current recommendations specify that GPs and other primary healthcare professionals should use a validated computer-based risk-assessment tool. If a computer-based risk-assessment tool is not available, they should provide a validated self-assessment questionnaire, for example, the Diabetes Risk Score assessment tool. Other providers, such as pharmacists should offer a validated self-assessment tool, with the Diabetes UK tool cited as an example. With recommendations that are permissive of choice in risk assessment tools, and no clear indication of superiority of a particular tool, an update in this area is not necessary at this time.

Non-alcoholic fatty liver disease

One stakeholder noted that non-alcoholic fatty liver disease is a known risk factor for type 2 diabetes, which is supported by the recommendations in non-alcoholic fatty liver disease (NAFLD): assessment and management (NICE guideline NG49). We will make an editorial amendment to footnote 1 of the recommendations (a list of conditions that can increase the risk of type 2 diabetes). This will note that NALD also increases risk of type 2 diabetes, with reference to the NAFLD guideline.

Blood glucose self-monitoring

One stakeholder indicated that blood glucose self-monitoring devices may have variable accuracy. This issue was thought to be not relevant to the guidelines on diabetes prevention, but has been logged for consideration in surveillance of guidelines on treating diabetes.

Digital technologies

One stakeholder suggested that the guideline should be updated to include the use of digital technologies such as wearable devices and apps. However, NICE has guidance on individual approaches to behaviour change (NICE guideline PH49), which is being updated to consider the use of technology such as apps, text messaging and the internet to drive improvements in behaviours such as physical activity, diet and weight. Additionally, The NHS DPP will be contributing future evidence to this specific question; a pilot in 5,000 people is live, and will assess whether digital behaviour change interventions delivered at scale and under service conditions are associated with change in clinical outcomes associated with diabetes prevention. We will check for publications resulting from this pilot, and consider any impact the results have on the guideline.

Bariatric surgery

One stakeholder suggested that the new evidence showing reduced incidence of type 2 diabetes after bariatric surgery should be included in an update. However, bariatric surgery is covered in the guideline on identification, assessment and management of obesity, which remains the primary indication for this procedure. The stakeholder additionally noted issues with implementation of recommendations on bariatric surgery. This has been logged for consideration in surveillance of the guideline on obesity.

See ensuring that published guidelines are current and accurate in developing NICE guidelines: the manual for more details on our consultation processes.

NICE Surveillance programme project team

Kay Nolan
Associate Director

Monica Desai

Consultant Public Health Adviser

Judith Thornton
Technical Adviser

Lynne Kincaid
Technical Analyst

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